

## CLAIMS

1. A radio frequency receiver comprising circuit elements a setting of which is controlled by at least one control voltage, a control unit for switching off the circuit elements during power-off periods, and a storage for storing the control voltage while the circuit elements are switched off, wherein the storage comprises a storage capacitor storing the control voltage.

2. The receiver of claim 1 wherein the storage comprises an electronic switch for disconnecting the capacitor from at least part of the circuit elements while the circuit elements are switched off.

3. The receiver of claim 1 wherein the storage comprises a hold circuit for actively maintaining the voltage over the capacitor while the circuit elements are switched off.

4. The receiver of claim 1 comprising at least one amplifier, wherein an amplification factor of the amplifier is controlled by the control voltage.

5. The receiver of claim 1 comprising at least one phase locked loop with a voltage controlled oscillator, wherein the control voltage controls the frequency of the voltage controlled oscillator.

6. The receiver of claim 1 wherein the control unit is adapted to switch off the circuit elements for a typical time period, wherein, during switch-off, a discharge time of the capacitor is much larger than the typical time period.

7. The receiver of claim 1 wherein the capacitor is part of a low pass filter in a feed-back loop.

8. The receiver of any one of the preceding claims comprising an analogue section for selectively receiving and amplifying a radio signal of a given frequency, wherein the control voltage controls a setting of said analogue section.

9. The receiver of claim 8 comprising a frequency downconverter for downconverting an incoming signal to an intermediate frequency and an oscillator circuit being connected to the downconverter, wherein a frequency of the oscillator circuit is being controlled by the control voltage and wherein the oscillator is being switched on and off by the control unit.

10. The receiver of claim 9 wherein the oscillator circuit comprises a voltage controlled oscillator in a phase locked loop, wherein the frequency of the voltage controlled oscillator is being controlled by the control voltage.

11. The receiver of claim 8 wherein said analogue section comprises an amplifier with a gain controlled by said control voltage, wherein said control voltage is adjusted to hold an average signal strength at a desired value.

12. The receiver of claim 1 wherein the control unit switches the circuit elements on and off according to a temporal structure of a received and transmitted radio signal.

13. A radio frequency receiver comprising  
a frequency downconverter for downconverting an incoming signal to an intermediate frequency,  
an oscillator circuit being connected to the downconverter, a frequency of said oscillator being controlled by a control voltage,

a control unit for switching off the oscillator during power-off periods, and

a capacitor for storing the control voltage while the oscillator is switched off.

14. The radio frequency receiver of claim 13 wherein the oscillator is arranged in a phase locked loop.